

(4.16 (4.34)

CLAIMS

1	1. (currently amended) A method for routing signals in a switch of a telecommunications
2	network, comprising the steps of:
3	(a) receiving an incoming signal at the switch;
4	(b) slicing data in the <u>received</u> incoming signal into a plurality of sub-signals; where the
5	(b) slicing data in the <u>received</u> incoming signal into a plurality of sub-signals; where the factor of the for each sub-signal:
5	(b) for each sub-signal.
6 7	(1) and the sub-signal into one or more subsets of data,
	dividing the sub-signal into one or more subsets of data; (2) (1) applying a checksum function to each subset of data to generate a checkbit for the subset:
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9	(3) (1) adding the checkbit for each subset to the sub-signal to generate an augmented
10	sub-signal;
11	(4) ly routing at least two copies of the augmented sub-signal in parallel through
12	redundant portions of a distributed switch fabric of the switch to generate at least two routed sub-signals
13	for the sub-signal, wherein the distributed switch fabric has multiple switch components adapted to route
14	different portions of each of a plurality of incoming signals in parallel;
15	(5) performing a checksum analysis on at least one of the routed sub-signals; and
16	selecting one of the routed sub-signals in accordance with the checksum
17	analysis; and
18	(d) combining data from the selected routed sub-signals corresponding to the plurality of
19	sub-signals to generate [[the]] <u>an</u> outgoing signal.
1	2. (currently amended) The invention of claim 1, wherein step (a) comprises the step of
2	terminating overhead data in the received incoming signal, wherein the checkbits replace at least some of
3	the terminated overhead data during routing through the distributed switch fabric.
1	3. (currently amended) The invention of claim 2, wherein the size of each subset of data in
2	each sub-signal is selected such that the addition of the checkbits does not increase the size of the data
3	augmented sub-signal routed through the distributed switch fabric relative to the size of the data in the
4	incoming signal corresponding sub-signal.
1	4. (original) The invention of claim 3, wherein the incoming signal is in a SONET format
2	and further comprising the step of buffering a sufficient amount of data to ensure errorless protection
3	switching upon detection of a fault during the checksum analysis.
1	5. (currently amended) The invention of claim 4, wherein the selection of routed sub-
2	signals for each sub-signal for the incoming signal is independent of the selection of routed sub-signals
3	for each other sub-signal for the incoming signal.
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1	6. (currently amended) The invention of claim 4, wherein the selection of routed sub-
2	signals for any one sub-signal for the incoming signal affects the selection of routed sub-signals for all
3	other sub-signals for the incoming signal.
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1	7. (original) The invention of claim 1, wherein the incoming signal is in a SONET format.
1	8. (currently amended) The invention of claim 1, wherein the selection of routed sub-
2	signals for each sub-signal for the incoming signal is independent of the selection of routed sub-signals
3	for each other sub-signal for the incoming signal.

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selected routed sub-signals corresponding to the plurality of sub-signals to generate the outgoing signal.

a combiner for each outgoing signal, wherein the combiner combines data from the

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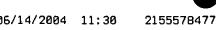
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- 13. (currently amended) The invention of claim 12, wherein step (a) comprises the step of terminating the switch is adapted to terminate overhead data in the received incoming signal, wherein the checkbits replace at least some of the terminated overhead data during routing through the distributed switch fabric.
- 14. (currently amended) The invention of claim 13, wherein the size of each subset of data in each sub-signal is selected such that the addition of the checkbits does not increase the size of the data augmented sub-signal routed through the distributed switch fabric relative to the size of the data in the incoming signal corresponding sub-signal.
- (original) The invention of claim 14, wherein the incoming signal is in a SONET format and further comprising buffers configured to buffer a sufficient amount of data to ensure errorless protection switching upon detection of a fault by the fault detector.
- (currently amended) The invention of claim 15, wherein the selection of routed sub-16. signals for each sub-signal for the incoming signal is independent of the selection of routed sub-signals for each other sub-signal for the incoming signal.
- 17. (currently amended) The invention of claim 15, wherein the selection of routed subsignals for any one sub-signal for the incoming signal affects the selection of routed sub-signals for all other sub-signals for the incoming signal.
 - 18. (original) The invention of claim 12, wherein the incoming signal is in a SONET format.
- 19. (currently amended) The invention of claim 12, wherein the selection of routed subsignals for each sub-signal for the incoming signal is independent of the selection of routed sub-signals for each other sub-signal for the incoming signal.
- (currently amended) The invention of claim 12, wherein the selection of routed subsignals for any one sub-signal for the incoming signal affects the selection of routed sub-signals for all other sub-signals for the incoming signal.
- (original) The invention of claim 12, further comprising buffers configured to buffer a 21. sufficient amount of data to ensure errorless protection switching upon detection of a fault by the fault detector.
- (new) The invention of claim 1, wherein each augmented sub-signal is the same size as 22. the corresponding sub-signal.
- (new) The invention of claim 12, wherein each augmented sub-signal is the same size as 1 2 the corresponding sub-signal.

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